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JOHN G. M'KENDRICK, M.D., LL.D., F.R.S.,

ON

CHRONOLOGICAL TABLES OF SCIENTIFIC MEN.

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[FROM THE *PROCEEDINGS* OF THE PHILOSOPHICAL SOCIETY OF GLASGOW.]

Chronological Tables of Scientific Men, showing the Names of the more distinguished Anatomists and Physiologists, and their Contemporaries. By JOHN G. M'KENDRICK, M.D., LL.D., F.R.SS.L. & E., Professor of Physiology in the University of Glasgow.

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THE tables to which these remarks are introductory were first prepared to illustrate a course of lectures on the history of physiological discovery, delivered at the Royal Institution of Great Britain, London, in 1883. Since then they have been amplified by the introduction of new names, and every precaution has been taken to secure accuracy. The tables give (1) the names of the more remarkable anatomists and physiologists; (2) the names of contemporary representatives of other sciences; (3) the names of contemporaries distinguished in philosophy, literature, and art; and (4) a note of one or more events or personages indicating the historical position of any particular decade. The years of birth and death are recorded in all cases where the information was available, and the name of the person is placed in the decade in which it is probable he did the chief work of his life. I have marked the department of science chiefly cultivated by each man by letters such as *A.*, anatomist, *P.*$_1$, physiologist, &c.; but I have not thought it necessary to indicate the pursuit of the representatives of philosophy, literature, and art. The period embraced is from 1500 to 1860.

Such tables help the imagination in picturing the characteristics of the period in which any notable man of science lived. We see the names of those who at the same time were influencing the minds of men in the realms of philosophy, literature, and art; and we recognise the more important contemporary events which mark the progressive stages of civilisation. Thus we can form some conception of the moral and intellectual atmosphere of the periods when the greatest discoveries in science were made. A short commentary on the tables will show how they may be read.

At the beginning of the sixteenth century, Achillini, sometimes named the second Aristotle, the first anatomist who dissected the human body, was lecturing on anatomy, medicine, and philosophy in Bologna; Linacre was then in practice as a physician in London, and founded the Royal College of Physicians; the learned Erasmus was preparing himself by study in Paris and the Netherlands for his great work; Ariosto was probably writing "Orlando Furioso;" Leonardo da Vinci and Titian were in the height of their fame; and Albert Dürer, after his travels, had settled in his native town of Nuremberg, and was engaged on his sixteen woodcuts on the Apocalypse. Ten years later, Paracelsus, the physician and philosopher, was brooding over the mysteries of alchemy; Sir Thomas More produced "Utopia" in 1516; Luther was giving Biblical lectures in the University of Wittenberg; Michael Angelo was decorating the ceiling of the Sixtine Chapel; Raphael was producing some of his finest works in the splendid period of Leo X.; and Correggio was engaged on frescoes at Parma. This was also the time of Charles V. of Spain; Cardinal Wolsey had reached the summit of his power; and the year 1513 is memorable for the Battle of Flodden Field. From 1520 to 1530, a truer theory of the mechanism of the heavens was shaping itself in the mind of Copernicus; Rabelais was working at "Pantagruel" and "Gargantua;" Holbein was painting altar pieces; Palissy, living in obscurity and poverty was sacrificing everything in the search after the secret of the white enamel; and the Reformation was then convulsing Germany. During the next twenty years (1530-1550), Vesalius was overturning the erroneous anatomy of Galen, and was laying the foundations of the true science; and other Italian anatomists, whose names are still stamped on the nomenclature of the science, were at work, such as Fallopius, Columbus, and Eustachius; Calvin was then working out his austere but logical system of theology, and religious enthusiasm was excited in the Church of Rome by the fervour of Ignatius Loyola; and John Knox was preparing for the struggle of the Reformation in Scotland. In 1553 appeared the "Restitutio Christianismi" of Servetus, for which he was burnt at the stake. The leading artists were Paul Veronese and Tintoretto; and Camoens was then probably engaged on his famous epic, the "Lusiad." The great events of the period were the Reformation in England, the foundation of the Jesuits, and the Council of Trent

The next forty years, from 1560 to 1600, witnessed the works of the precursors of Harvey, the discoverer of the circulation of the blood. Fabricius ab Aquapendente, Aranzi, Varolius, Bauhin, and others, investigated the mechanism of the heart and its valves. In particular, about 1580, Caesalpinus, an Italian anatomist, came near the discovery of the circulation; indeed, the honour is claimed for him by his countrymen, and a statue recording the event has been erected to his memory. About this period also, Sanctorius made quantitative examinations of various physiological processes, Gilbert examined electrical phenomena, Snellius in Leyden and Tycho Brahe in Denmark were engaged in their astronomical observations, and Battista Porta was writing on physiognomics and optical phenomena. In the last decade of the century we find Kepler enunciating the laws that regulate planetary motion, and Bacon publishing his first philosophical essays. Giordano Bruno was then promulgating in many countries advanced doctrines, some of which have stood the test of time, but for which he died at the stake. These forty years also witnessed the appearance of the works of George Buchanan, of Tasso, of the "judicious" Hooker, of Sir Walter Raleigh, and, above all, of Spenser. Then were also laid the foundations of English law by Coke, and Cervantes produced Don Quixote, "the child of his wit born in a gaol." Drake sailed round the world in 1577, and the wreck of the Spanish Armada marks 1588.

Contemporary with William Harvey, who taught the new doctrines of the circulation of the blood in 1616, although they were not formally published till 1628, we find Drebbel, the inventor of the compound microscope, Galileo, the physicist and astronomer, Napier, the inventor of logarithms, and Van Helmont, great as a physician, physiologist, and chemist. At that period also, Shakespeare wrote his immortal plays, the first edition appearing in 1623, and then flourished "rare Ben Jonson." The Pilgrim Fathers made their journey to America while doctors were disputing as to those new theories regarding the circulation of the blood. About 1620, Asseli made the important discovery of the lacteal system. Rubens and Vandyck were the artists of the period. "Saintly" George Herbert, the first poet of Anglican theology, was then writing the "Temple" in the parsonage of Bemerton, near Salisbury, and among his friends were Izaak Walton and Francis Bacon. Cardinal Richelieu was then the master of France.

The period between 1630 and 1660 was remarkably rich in great men. Among the anatomists and physiologists we find Sylvius, who worked on the anatomy of the brain, Borelli, who investigated animal locomotion with mathematical precision, Bartholin and Wirsung, who examined the anatomy of glands, Schneider, who described the organs of sense, Pecquet, who discovered the thoracic duct, Willis, who dissected and described the central nervous system, more especially the brain, and Swammerdam, who laid the foundations of accurate visceral anatomy. Contemporary with these was the great Descartes, Otto Guericke, the inventor of the air pump, Horrocks, the astronomer, Pascal, physicist and philosopher, and Huyghæns, well known for researches in the science of optics. In the first part of the period, medicine was represented by Kenelm Digby, and in the latter part by the much greater Sydenham, the father of modern medicine. While these men were engaged in science, Milton was writing his immortal epics, Herrick was singing his lyrics, and Corneille excited the jealousy of Richelieu and the Academy by producing the "Cid." A galaxy of artists existed, composed of Velasquez, Claude Lorraine, Rembrandt, Salvator Rosa, and Murillo. Hobbes was then a power in literature; Jeremy Taylor was the preacher of the age; Molière was acquiring the experience of a travelling actor that enabled him, between 1662 and 1673, to produce his unrivalled comedies. In the political drama we find the signing of the Covenant in Scotland, the trial of Hampden, the civil war, the death of Charles I. in 1649, and the brief protectorate of Cromwell from 1653 to 1658.

Great names also appear in the record of the next forty years, from 1660 to 1700. Boyle investigated the properties of air and of gases, and he led the way to knowledge of the respiratory process. Jollyfe discovered the lymphatics; Malpighi demonstrated under the microscope, to the astonished gaze of Harvey, now an old man, the circulation of the blood in the web of a frog's foot, thus completing the discovery of the circulation; Lower first transfused blood from one living being into another; Ray and Grew laid the foundations of modern natural history; and Leeuwenhoek revealed, by his simple microscope, many of the wonders of the invisible world.

Among these men also, special mention must be made of John Mayow, who first had correct views of the theory of the respiratory process, and who nearly discovered oxygen. Then also flourished Vieussens, Meibom, Duvernay, Glisson, Ruysch, Peyer, Lancisi, Brunner, Valsalva, Havers, and Bartholin, names well known to the student of human anatomy. Towards the close of the century Parfour du Petit investigated, for the first time, the physiology of the sympathetic system of nerves. This was also the period of Spinoza. Isaac Barrow was the first Lucasian Professor of Mathematics in Cambridge, from 1663 to 1669, but in the latter year, in order to devote himself to the study of theology, he resigned his chair to his illustrious pupil, Isaac Newton, who soon became a star of the first magnitude in the intellectual firmament. Between 1690 and 1716, Leibnitz composed his chief philosophical works, and for thirty years (from 1670 to 1700), he was busy with mathematics, natural science, theology, jurisprudence, economics, and philology. In pure literature we have Bunyan, the inspired dreamer, Bossuet and Massillon, the French preachers, and Racine, the dramatist. Philosophy is represented by Malebranche, and still more by John Locke, whose writings turned the current of philosophic speculation into a new direction. Purcell, the father of English music, then lived, and Christopher Wren was erecting in London some of the buildings that bear the stamp of his architectural genius.

The first half of the eighteenth century shows on its roll the names of Boerhaave, physiologist and physician; Stephen Hales, an English rector at Teddington, in Kent, who, in the quietude of his country parish, first made accurate measurements of the force of the blood in the vessels, and laid the foundations of our present knowledge of the hydrodynamics of the circulation, both in plants and animals; and Haller, the great Swiss physiologist and physician, who carried on with Whytt, a professor in the University of Edinburgh, and the ancestor of the novelist Whyte-Melville, a lively controversy as to the inherent irritability of muscle. Just about the time of this controversy, Scotland was agitated by the events of the '45, Needham was experimenting on spontaneous generation, Trembley was demonstrating the wonderful vitality of the little *Hydra*, Buffon was engaged in his great works on natural history, and Meckel, Zinn, and Camper were busy in anatomical investigations. William Cullen, about the middle of the century, had reached the zenith of his career as a physician in Edinburgh. In the other sciences we find Stephen Gray investigating magnetism. The mathematicians include such names as Jurin, Maclaurin, Bradley, Euler, Daniel Bernoulli, D'Alembert, and Simson, while among the physicists we find Papin, Maskeleyne, Dollond, and Boscovitch. Linnæus was then establishing his great system of classification. It was about this period also that we find the more distinguished members of the remarkable family of the Bernoullis, all more or less remarkable as mathematicians and physicists, including James Bernoulli I., who was born in 1654; Nicholas Bernoulli I., John Bernoulli I., Daniel Bernoulli I., John Bernoulli II., John Bernoulli III., Daniel Bernoulli II., James Bernoulli II., and Christopher Bernoulli, who was born in 1782, and lived well into the present century. Thus the Bernoullis were represented in the world of science for nearly 150 years. It is scarcely necessary to mention the great men who then adorned literature. Defoe, Swift, Addison, Pope, Montesquieu, Voltaire, Metastasio, Fielding, Condillac, Rousseau, Johnson, Smollett, Diderot, and Lessing appear on the roll. The idealistic philosophy of Berkeley appeared at this time, and David Hume, following Locke, resolved philosophy into universal scepticism. Painting is represented by Watteau, Hogarth, Gainsborough, and Reynolds. The fugues of Bach, the oratorios of Handel, and the soft harmonies of Pergolesi were produced about this time. John Wesley was engaged in the great revival of religion now associated with his name, David Garrick was the actor of the day; and while Swedenborg was dreaming his dreams and seeing his visions, Clive was laying the foundations of our Indian Empire, Wolfe was establishing the Dominion of Canada, and the first Pitt, as the Premier of England, was animating and directing the achievements of the British armies in the four quarters of the globe.

The latter half of the century was remarkable for great progress in science. In these years John Hunter and William Hunter, natives of Lanarkshire, pursued their anatomical and physiological studies with great success, and formed those collections which John bequeathed to the Royal College of Surgeons of England, now in Lincoln's Inn Fields, and William to the University of Glasgow, constituting the nucleus of our Hunterian Museum. The Abbe Spallanzani, as an experimental physiologist of the first order, advanced the knowledge of digestion, respiration, and generation; Hewson, a young surgeon in London, examined the properties of chyle, lymph, and blood, and pointed out the true functions of such organs as the lymphatic glands, the spleen, the thymus, &c.; Unzer took the first steps towards a correct theory of reflex actions; and Erasmus Darwin, while engaged in the arduous duties of the medical profession, wrote "Zöonomia" and other works, which contain the germ of the brilliant generalisations of his immortal grandson, Charles Darwin. This is the period also of the epoch-making investigations of Galvani into the action of electricity on the nerves and muscles of frogs, from which, by the criticisms of Volta and many others, has developed the science of electricity as it now stands. James Watt's invention of the separate condenser of the steam-engine was made in 1769, and Arkwright's spinning "jenny" appeared in the same year. These two machines effected a revolution, and to them may be traced the origin of many of the economic questions of the present day. In these years also Joseph Black discovered carbonic acid, and this discovery, combined with the brilliant investigations of Lavoisier into the effects produced on air by breathing, advanced our knowledge not only of respiration but of all processes of combustion. Lavoisier pursued his investigations amidst the turmoil of the French Revolution, and at last became one of its victims, after craving a delay of a few days that he might finish his experiments. Hutton may be said to have then started a careful examination of the crust of the earth, Coulomb and Franklin advanced into the realm of electricity, and Biot and De Saussure made many discoveries in physics. Then it was also that Mesmer excited the Parisians by his strange experiments, and started investigations that now and again attract attention under the names of mesmerism, animal magnetism, odylic force, electro-biology, and hypnotism. The historian Gibbon was then at work. Lavater was developing his theories of physiognomy, now almost forgotten, and the University of Glasgow had among its professors Thomas Reid and Adam Smith.

Lamarck was then enunciating his theory of development, which must always be a guide in investigation. The science of chemistry was advanced by Priestley, Scheele, Fourcroy, and Dalton. Modern chemistry may be said to date from the discovery of oxygen by Priestley in 1774, and the atomic theory of Dalton became the key to the chemical constitution of matter. The mathematicians and physicists numbered in their ranks such men as Playfair, Hayley, Laplace, Lagrange, Legendre, Carnot, Fourier, Leslie, Haüy, Rumford, and Ampère. Botany was represented by Joseph Banks and Jussieu, and Cuvier was the giant among comparative anatomists. Amidst these coruscations of scientific discovery, Goldsmith was writing the "Vicar of Wakefield," Cowper the "Task," Robert Burns was singing his songs in Ayrshire, and Schiller was the poet of Germany. The musicians were Gluck, Mozart, Haydn, Weber, and, chief of all, Beethoven, David was the great painter, and Flaxman and Canova were then at the height of their fame as sculptors. A new departure was taken in philosophy by Kant, the results of which will influence human thought for all time. The brilliant Sheridan was then at his best, and Parliament listened to the eloquence of the second Pitt, of Charles Fox, and Edmund Burke.

Perhaps the most remarkable period of all includes the last ten or fifteen years of the eighteenth and the first ten years of the nineteenth centuries.

The number of distinguished men in all departments about this period is so great that one cannot arrange them into decades, and they can only be viewed as a group. I have sometimes thought that possibly human intellect attained its greatest development about this time, which may be fitly compared too with the most glorious period of ancient Greece. Already I have mentioned a number of names belonging to this time. Then flourished Thomas Young, the discoverer of the key to hieroglyphic inscriptions, the author of the undulatory theory of light, a physiologist who brought his wide knowledge of physics to bear on the investigation of our perceptions of colour, on time in physiological processes, and on the hydraulics of the circulation—a man who was said by Helmholtz to be a hundred years ahead of his contemporaries. This was the period also in which their best work was done by the physicists Gauss, Malus, Arago, Seebeck, Oersted, Peltier, Fresnel, Wollaston, Frauenhofer, Nobili, Ohm, Cagniard de la Tour; and by the chemists Thomas Thomson, Gay Lussac, Brande, Becquerel, Berzelius, and Niepce, one of the pioneers of the modern art of photography. Goethe was then at his best. Hegel, Schelling, and Schopenhauer were framing their systems of philosophy; William Blake was flashing his meteoric genius, the products of which strike one as if they had come from another world; Jeremy Bentham was working out his system of philosophy which culminated in the labours of the two Mills and of Alexander Bain; and Walter Scott was throwing off the products of his genius, learning, and vivid imagination with reckless profusion of brain power, which brought its own nemesis. This was the time also of the sweet songs of Beranger, of the philosophy and poetry of Coleridge, of the interpretations of nature of Wordsworth, of the passion of Byron, of the intense but dreamy genius of Shelley, and of the finely artistic productions of the immortal Keats. All these gifts were presented to the world during the agonies of the French Revolution and the Wars of Napoleon.

Since 1810 science has made rapid strides. In physiology we have the names of Beaumont, who investigated the processes of digestion in man about 1824; of the brothers Weber, more especially E. H. Weber, who examined muscular action and the circulation; of Marshall Hall, who, following Unzer and Prochaska, established the doctrines of reflex action; of Flourens and Magendie, who were for many years the leading physiologists of France; of Johann Müller of Berlin, whose views as to the specific energy of nerves did much to guide subsequent investigators in the field of the physiology of the organs of sense; of Fechner, who was the pioneer in the investigation of psycho-physical phenomena; and, lastly, of Claude Bernard, the great Frenchman, whose discoveries in physiology are too numerous to mention. The anatomists included such men as Krause, Von Baer, Schwann, Schroeder van der Kolk, and John Goodsir. The period about 1840 was particularly fruitful. Then the cell theory was promulgated, and the researches of Du Bois-Reymond into electro-physiology, of Helmholtz into muscular action, nervous action, physiological optics, and physiological acoustics, and of Ludwig into the circulation, then commenced. The names of their scientific contemporaries scarcely require to be mentioned. Chevreul, Faraday, Buckland, Chasles, Struve, Mary Somerville, Cauchy, Babbage, Mitscherlich, Poggendorff, Charles Lyell, William Rowan Hamilton, Listing, John Herschell, Challis, Christison, Mulder, Gassiot, Dumas, Liebig, Mayer, Joule, Leverrier, Adams, Draper, Wheatstone, Andrews, Bunsen, are familiar to every student in science. The leaders in literature and art, during this period, are well known to every one.

A.	Anatomist.	*Th.*	Theologian.
$P._{1}$	Physiologist.	*Ph.*	Philosopher.
$P._{2}$	Physician.	*N.*	Naturalist.
$P._{3}$	Physicist.	*S.*	Surgeon.
C.	Chemist.	*E.*	Engineer.
B.	Botanist.	*CA.*	Comparative Anatomist.
As.	Astronomer.	*G.*	Geologist.
M.	Mathematician.		

NOTE.—For some of the dates in the fourth column I am indebted to Professor Nichol's *Tables of European History, Literature, Science, and Art, from* 200 *to* 1888. 4th ed. J. Maclehose & Sons, Glasgow, 1880.

Period.	Anatomists and Physiologists.	Representatives of Collateral Sciences.	Representatives of Philosophy, Literature, and Art.	Collateral Events.
1500	Achillini, *A.*, 1461-1512.	Linacre, *P.*$_2$, 1460-1524.	Erasmus, 1467-1536. Ariosto, 1474-1533. Leonardo da Vinci, 1452-1519. Titian, 1477-1576. Albert Dürer, 1471-1528.	Julius II., 1503. Colet founds St. Paul's School, 1512.
1510	—	Paracelsus, *P.*$_2$ and *C.*, 1493-1541.	Sir Thomas More's "Utopia" (1516), 1480-1535. Luther, 1483-1546. Michael Angelo, 1475-1564. Raphael, 1483-1520. Correggio, 1494-1534.	Charles V. of Spain. Flodden, 1513. Wolsey, 1471-1530. Tyndale's N. Testament, 1526.
1520	—	Copernicus, *As.*, 1473-1543.	Rabelais, 1495-1553. Holbein, 1497-1543. Palissy, 1499-1589.	Reformation in Germany, 1519-1530. James V. of Scotland, 1528-1542.
1530	Vesalius, *A.*, 1514-1564.	—	Calvin, 1509-1564. Ignatius Loyola, 1491-1556.	Foundation of the Jesuits, 1534. Reformation in England, 1534.
1540	Fallopius, *A.*, 1523-1562. Columbus, *A.*, *d.* 1559.	Ambrose Paré, 1507-1590. (*Ligature of arteries.*)	Ascham, 1515-1568. Tintoretto, 1512-1594.	Council of Trent, 1545-1563.
1550	Eustachius, *A.*, 1520-1574. Dodonée, *P.*$_2$ and *A.*, 1518-1585. Servetus, *Th.* and *P.*$_1$, 1509-1553. (*Discovery of pulmonary circulation.*)	—	John Knox, 1505-1572. Paul Veronese, 1528-1588. Camoens, 1527-1579.	Martyrdom of Servetus, 1553. Elizabeth, 1558-1603.

1560	Fabricius ab Aquapendente, *A.* and $P._1$, 1537-1619. Aranzi, *A.*, 1530-1589.	Libavius, *C.*, *d.* 1618. (*Chemical text-books.*)	George Buchanan, 1506-1582. Palestrina, 1524-1594.	Reformation in Scotland, 1560. Queen Mary Stuart, 1562-1568. London Royal Exchange, 1571.
1570	Varolius, *A.*, *b.* 1543.	Gilbert, $P._3$, 1540-1603. Snellius, $P._3$, 1547-1613. Mercator, *M.*, 1512-1594.	Isaac Casaubon, 1559-1614. Tasso, 1544-1595.	XXXIX. Articles, 1571. Peace of Utrecht, 1579. Drake sails round the world, 1577. Massacre of St. Bartholomew, 1572.
1580	Piccolomini, *A.* and $P._2$, *b.* 1556. Bauhin, *C.* and *B.*, 1550-1624. Alberti, *A.*, about 1581. Donatus, *A.*, about 1588. Cæsalpinus, *A.*, 1519-1603.	Tycho Brahé, *As.*, 1546-1601. Giordano Bruno, *Ph.*, *d.* 1600. Giambatista Porta, *C.*, 1538-1615.	Hooker, 1553-1600. Raleigh, 1552-1618. Spenser, 1553-1599. ("Faerie Queene," 1590.)	Edin. Univ., 1582. The Armada, 1588.
1590	Sanctorius, *C.* and $P._1$, 1561-1636.	Kepler, *As.*, 1571-1630. Bacon, *Ph.*, 1561-1626. (*First ed. of Essays, 1597.*)	Coke, 1550-1634. Cervantes, 1547-1616. ("Don Quixote," 1605.) Marlowe, 1564-1593.	Presby. Church established in Scotland, 1592. Edict of Nantes, 1598. Bodleian Library restored, 1597.
1600	Van der Spiegel, *A.*, 1578-1625.	Drebbel, $P._3$, 1572-1634. (*First compound microscope, 1590.*) Galileo, $P._3$, 1564-1642. (*Invention of thermometer.*)	Shakespeare, 1564-1616. Rubens, 1577-1640.	James I., 1603-1625. Gunpowder Plot, 1605. East India Coy.'s Charter, 1600. Virginia founded, 1607.

Period	Anatomists and Physiologists.	Representatives of Collateral Sciences.	Representatives of Philosophy, Literature, and Art.	Collateral Events.
1610	William Harvey, *A.* $P._1$, and $P._2$, 1578-1657. (*Circulation of the blood—De Motu Cordis et Sanguinis, 1628.*) Van Helmont, $P._1$ and $P._2$, 1577-1644. (*Beginning of clinical medicine.*) L. G. Hoffman, *A.*, 1572-1648.	Napier, *M.*, 1550-1617. (*Logarithms in 1614.*)	English Bible. Ben Jonson, 1574-1637. Selden, 1584-1654.	The Pilgrim Fathers, 1620. Thirty Years' War, 1618-1648. Authorised version of Bible, 1611. First Water Supply for London, the "New River," 1613.
1620	Riolan, *A.*, about 1626. Asselli, *A.*, about 1622. (*Discovery of lacteals.*)	Gassendi, $P._3$, 1592-1655. Riccioli, $P._3$, 1598-1671.	George Herbert, 1593-1633. Vandyck, 1599-1641. Grotius, 1583-1645.	Foundation of New York, 1624. Richelieu, 1585-1642. First English Newspaper, 1622. First Edition of Shakespeare, 1623. Petition of Right, 1628.
1630	Deleboe, *A.*, 1614-1672. (*Known as Sylvius.*)	Descartes, *Ph.* and *M.*, 1596-1650. Von Guericke, $P._3$, 1602-1686. (*Invention of air pump.*) Stevinus, *C.*, 1633. Horrocks, *As.*, 1619-1641. Wallis, *M.*, 1616-1703. Ashmole, $P._3$, 1617-1692. Kenelm Digby, $P._3$ and *C.*, 1603-1665. Glauber, *C.* and $P._2$, 1603-1668.	Herrick, 1591-1674. Velasquez, 1599-1660. Corneille, 1606-1684.	Covenant in Scotland, 1638. Trial of Hampden, 1637-8. Long Parliament, 1640-1653. French Academy, 1635.

1640	Borelli, *A.* and $P._3$, 1608-1679. T. Bartholin, *A.*, 1616-1680. Wirsung, *A.*, about 1642. Schneider, *A.*, 1610-1680.	Torricelli, $P._3$, 1608-1647 (*Invention of barometer, 1643*).	Milton, 1608-1674. (First ed. of "Paradise Lost," 1667.) Claude Lorraine, 1608-1682. Rembrandt, 1607-1669. Salvator Rosa, 1615-1673. Murillo, 1618-1682.	Civil War, 1642-1651. Marston Moor, 1644. Foundation of Royal Society, 1645. Confession of Faith, 1648. Execution of the King, 1649. Tasmania discovered, 1642.
1650	Van Horn, *A.*, 1621-1670. Rudbeck, *A.* and $P._1$, about 1650. Pecquet, *A.*, about 1651. (*Discovery of thoracic duct.*) Highmore, *A.* and $P._2$, about 1651. Willis, *A.* and $P._2$, 1622-1675. Swammerdam, *A.*, 1637-1680. Boyle, $P._1$, $P._3$, and *C.*, 1627-1691.	Pascal, $P._3$ and *Ph.*, 1623-1662. Huyghens, *As.*, 1629-1695. Sydenham, $P._2$, 1624-1689.	Hobbes, 1588-1679. Molière, 1622-1673. Jeremy Taylor, 1613-1667. Jan Steen, 1626-1679. Isaac Walton, 1593-1683. ("Compleat Angler," 1653.)	Cromwell Protectorate, 1653-1658. Louis XIV., 1653-1715. Navigation Act, 1651.
1660	Jollyfe, *A.*, *b.* about 1622 (*Discovery of lymphatics.*) Malpighi, $P._1$, 1628-1694. (*Demonstration of circulation under the microscope.*) Lower, *A.* and $P._2$, 1631-1691. (*Transfusion of blood.*) Ray, *N.*, 1628-1704. Grew, *N.* and $P._1$, 1628-1711. M. Hoffmann, *A.*, 1622-1698. Stenon, *A.*, 1638-1687.	James Gregory, $P._2$ and *C.*, 1638-1675. (*Reflecting telescope.*)	Spinoza, *Ph.* 1632-1677. Bunyan, 1628-1688. ("Pilgrim's Progress," 1678.) Bossuet, 1627-1704. Isaac Barrow, *Ph.* and *Th.*, 1630-1677. Samuel Pepys, 1632-1703.	First Standing Army. Plague of London, 1665. Fire of London, 1666. Dutch War, 1667.
1670	Vieussens, *A.* & $P._2$, 1641-1716.	Roemer, $P._3$, 1644-1710.	Dryden, 1631-1700.	Habeas Corpus Act, 1679.

Period.	Anatomists and Physiologists.	Representatives of Collateral Sciences.	Representatives of Philosophy, Literature. and Art.	Collateral Events.
1670	Meibom, *A.*, *b.* 1638. Leeuwenhoek, $P._1$, 1632-1723. Hooke, P_3. and $P._2$, 1635-1702. (*Theory of respiration.*) Mayow, $P._1$ and *C.*, 1645-1679. (*Theory of respiration.*) Duverney, *A.* and $P._1$, *b.* 1647. Bellini, *A.*, *b.* 1643. Glisson, *A.*, 1596-1677.		Racine, 1639-1699. Malebranche, 1638-1715. Boileau, 1636-1711.	Origin of Whig and Tory, 1680. English Revolution, 1688.
1680	Baglivi, *A.* and $P._2$, 1669-1707. Ruysch, *A.*, 1638-1731. (*Art of injecting blood vessels.*) Peyer, *A.* and $P._2$, *b.* 1653. Lancisi, *A.*, 1654-1720. Brunner, *A.* and $P._1$, *b.* 1653.	Newton, *M.* and $P._3$, 1642-1727. ("Principia," 1687.) Leibnitz, P_3. and *M.*, 1646-1716. James Bernoulli (I.), $P._3$, 1654-1765. Radcliffe, $P._2$, 1650-1714. Mariotte, $P._3$, *d.* 1684.	Locke, 1632-1704. ("Essay," 1690.) Massillon, 1663-1742. Purcell, 1658-1695.	Peter the Great, 1689-1725. Rebellion of Monmouth, 1685. First Russo-Turkish War, 1687. First attempt to light streets of London, 1684.
1690	Valsalva, *A.*, 1666-1723. Clopton Havers, *A.* and *S.*, about 1691. J. M. Hoffmann, *A.*, 1653-1727. Verheyen, *A.*, about 1693. Vallisnieri, *A.* and *B.*, 1661-1730 G. Bartholin, *A.*, 1655-1738. Parfour du Petit, *A.* and $P._1$, 1674-1750.	Stahl, $P._2$, 1660-1734. Halley, *As.*, 1656-1742. De Moivre, *M.*, 1667-1754. F. Hoffmann, $P._3$, 1660-1742.	Sir C. Wren, 1632-1723. (*St. Paul's completed, 1708.*) Bentley, 1662-1742.	William III., 1689-1702. First Fire Insurance, 1696. National Debt begins, 1693. Darien Scheme, 1698. Bank of England, 1694.

1700	Boerhaave, $P._1$ and $P._2$, 1668-1738. Keill, $P._1$ and $P._2$, 1673-1719.	D'Ons en Bray, $P._3$, 1678-1753. Stephen Gray, $P._3$, *d.* 1736. Mead. $P._2$, 1673-1754. Manfredi, $P._2$, 1674-1739.	Defoe, 1661-1731. ("Robinson Crusoe," 1719.) Swift, 1667-1745. ("Gulliver's Travels," 1726.) Addison, 1672-1719. ("Spectator," 1711.) Steele, 1671-1729. ("Tatler," 1709.)	Union with Scotland, 1707. Discovery of Herculaneum, 1708. Newcomen's steam engine, 1705.
1710	Stephen Hales, *N.* and $P._3$, 1677-1761. (*Hydraulics of the circulation.*) Morgagni, *A.*, 1682-1771. (*Beginning of pathology.*)	Jurin, $P._3$, 1684-1750. Papin, $P._3$ and *C.*, 1647-1710. Cotes, $P._3$, 1682-1716. Nicholas Bernoulli (I), M. and $P._3$, 1687-1759. Cheselden, *S.*, 1688-1752.	Pope, 1688-1744. Le Sage's "Gil Blas," 1715. Watteau, 1684-1721.	George I. Walpole, 1721-1742. Law's Missisippi Scheme, 1717-1720. Treaty of Utrecht, 1713. General Post Office, 1710.
1720	Réaumur, $P._1$ and *C.*, 1683-1757. Pacchioni, *A.*, *b.* 1695.	Maclaurin, *M.*, 1698-1746. Bradley, *M.*, 1692-1762. John Bernoulli (I.), *M.* and $P._3$, 1667-1748.	Berkeley, 1684-1753. J. S. Bach, 1685-1750. Handel, 1685-1759. Peroglesi, 1707-1736. Montesquieu, 1689-1755.	Louis XV., 1723-1774. Foundation of Guy's Hospital, 1724. George II., 1727-1760.
1730	Albinus, *A.*, 1697-1770.	Linnæus, *B.* and *N.*, 1707-1778. Maskeleyne, $P._3$, 1732-1811. Hawksbee, $P._3$ and *As.*, about 1731. Dollond, $P._3$, 1706-1761. Euler. *M.*, 1707-1783. Daniel Bernoulli (I.), $P._3$ and *M.*, 1700-1752. Cramer, *M.* and $P._3$, 1704-1752.	Wesley, 1703-1791. Voltaire, 1694-1778. Metastasio, 1698-1782. Hartley, 1705-1757. Bishop Butler, 1692-1752. Richardson, 1689-1761.	Porteous Mob, 1736. Canton's first electrometer, about 1732. George Washington, 1732-1799 "Gentleman's Magazine," 1731 Coal used to smelt iron, 1740.

Period.	Anatomists and Physiologists.	Representatives of Collateral Sciences.	Representatives of Philosophy, Literature, and Art.	Collateral Events.
1740	Haller, *A.*, $P._1$, and $P._2$, 1708-1777. (*Theory of muscular irritability.*) Whytt, $P._1$ and $P._2$, 1714-1766 Gaubius, $P._1$ and $P._2$, 1705-1780 Needham, *N.*, 1713-1781. Buffon, *N.*, 1707-1788. Trembley, *N.*, 1700-1784. Lieberkühn, *A.*, 1711-1756. J. F. Meckel, *A.*, 1713-1781.	D'Alembert, *M.*, 1717-1783. Clairault, *M.*, 1713-1765. Simson, *M.*, 1687-1768. Boscovitch, *M.*, 1711-1787. Kästner, $P._3$, 1719-1800. Lacaille, $P._3$, 1713-1762. John Bernoulli (II.), *M.* and $P._3$, 1740-1790. Fothergill, $P._2$, 1712-1780.	Fielding, 1707-1754. Hogarth, 1697-1764. David Garrick, 1716-1779. Condillac, 1715-1780. Rousseau, 1712-1778. ("Contrat Social," 1762.) Swedenborg, 1689-1772.	Peace of Aix-la-Chapelle, 1748. The "'45" Rebellion in Scotland. Clive in India, 1750-1760.
1750	William Cullen, $P._1$ and $P._2$, 1712-1790. Bonnet, *N.*, 1720-1793. Zinn, *A.*, 1727-1759. Camper, *A.*, 1722-1789.	Smeaton, *E.*, 1714-1792. Baumé, $P._3$ and *C.*, 1728-1804.	Hume, 1711-1776. Johnson, 1709-1784. (Dictionary begun, 1755.) Diderot, 1713-1784. (Vol. I. "Encyclopédie," 1751.) Smollet, 1721-1771. Lessing, 1729-1781. Gainsborough, 1727-1788. Reynolds, 1723-1792.	Discovery of Pompeii, 1750. Seven Years' War, 1756-1763. First Pitt, 1708-1778. Battle of Plassey, 1757. Wolfe's death at Quebec, 1759. Kaye's "fly-shuttle" in cotton spinning, 1750. Brit. Museum opened, 1759.
1760	John Hunter, *A.*, $P._1$ and *S.*, 1728-1793. (*Action of blood vessels.*) Spallanzani, *N.* and $P._1$, 1729-1799. (*Discoveries in digestion, respiration, generation.*)	Mesmer, *N.* and $P._1$, 1733-1815. Borda, $P._3$, 1733-1799. Lalande, *M.*, 1732-1807. James Watt, *E.*, 1736-1819. Hutton, $P._3$, 1726-1797. Lavoisier, *C.*, 1743-1794.	Thomas Reid, 1710-1796. Adam Smith, 1723-1790. ("Wealth of Nations," 1776.) Gilbert White. 1720-1793. Gibbon, 1737-1794. Lavater, 1741-1801. Chatterton, 1752-1770.	Birth of Napoleon and Wellington in 1769. George III., 1760-1820. Hargreave's "spinning jenny," 1767. Arkwright's "jenny," 1769.

	Galvani, $P._1$ and $P._3$, 1737-1798. (*Animal electricity.*) Hewson, $P._1$ and $P._2$, 1739-1774. (*Functions of blood glands.*) Unzer, $P._2$, 1727-1799. Erasmus Darwin, *N.*, $P._1$, and $P._2$, 1731-1802.	Joseph Black, *C.* and $P._2$, 1722-1799. (*Discovery of carbonic acid, 1754.*) Wedgwood, 1730-1795. Coulomb, $P._3$, 1736-1806. Lagrange, *M.*, 1736-1813. Sir W. Herschell, *As.*, 1738-1822 Bailey, *M.*, 1736-1793. Franklin, $P._3$, 1706-1790. William Hunter, $P._1$ and $P._2$, 1718-1783. Robison, $P._3$, 1739-1805. Biot, $P._3$, about 1774. De Saussure, $P._3$, 1740-1799.	James Boswell, 1740-1795.	Watt's separate condenser, 1769. Watt's double-acting engine, 1782. Bridgewater Canal, 1761. Stamp Act, led to Amer. War, 1765.
1770	Vic d'Azyr, *A.*, 1748-1794. Scarpa, *A.*, 1747-1832. Volta, $P._3$, 1745-1826. Araldi, $P._1$, 1740-1843. Lamarck, *N.* and *Ph.*, 1744-1829. (*Theory of development.*)	Cavendish, *C.*, 1731-1810. Sir J. Banks, *B.*, 1743-1820. Gmelin, *C.*, 1748-1840. John Bernoulli (III.), *M.*, 1744-1807. Atwood, $P._3$, 1745-1807. Priestley, 1733-1804. (*Oxygen discovered, 1774.*) Playfair, $P._3$, 1748-1810. Venturi, $P._3$, 1746-1822. Berthollet, *C.* and $P._3$, 1748-1822 Scheele, *C.*, 1742-1786. Bramah, $P._3$, 1749-1814. Daniel Bernoulli (II.), $P._3$, 1751-1834. Fourcroy, *C.*, 1755-1809. J. Brown, $P._2$. (*Brunonian School.*)	Goldsmith, 1728-1774. Cowper, 1731-1800. Burns, 1759-1796. Kant, 1724-1804. Gluck, 1714-1787. Mozart, 1756-1791. Jacobi, 1743-1819. Sir W. Jones, 1746-1794. (*Introd. Sanskrit to Europe.*) Hannah More, 1745-1833.	Crompton's "mule-jenny," 1775. American War, 1775-1783. Declar. of Independence, 4th July, 1776. Asiatic Society established at Calcutta, 1784.

Period.	Anatomists and Physiologists.	Representatives of Collateral Sciences.	Representatives of Philosophy, Literature, and Art	Collateral Events.
1780	Prochaska, $P._1$ and $P._2$, 1749-1820. Sömmering, *A.*, 1755-1830. Mascagni, *A.*, *b.* about 1752. Blumenbach, *N.*, 1752-1840. Gall, $P._1$ and $P._2$, 1758-1828. (*Phrenology.*)	Argand, *C.*, 1755-1803. Babbington, *B.*, 1757-1833. Hayley, *As.*, 1749-1820. Laplace, M. and $P._3$, 1749-1827. Legendre, *M.*, 1752-1833. Count Rumford, $P._3$, 1753-1814 Pierre Prevost, $P._3$, 1751-1839. J. P. Prevost, *C.*, 1755-1819. Olbers, $P._3$, 1758-1840. Carnot, *M.* and $P._3$, 1753-1823. James Bernoulli (II.), $P._3$, 1759-1789. Telford, *E.*, 1757-1834. Chladni, $P._3$, 1756-1827. Daguerre, *C.*, 1789-1851.	Sheridan, 1751-1816. Dugald Stewart, 1753-1828. Paley, 1743-1805. Wieland, 1733-1813. Vernet, 1758-1835. David, 1748-1825. Haydn, 1732-1809.	America recognised, 1783. Second Pitt, 1759-1806. Fox, 1749-1806. Edmund Burke, 1729-1797. Linnæan Society founded, 1788. Cartwright's steam power-loom, 1784. Cort's puddling process, 1784. Discovery that electricity decomposed water, by Päts van Trostwyk, 1789. States-General meeting, 1789.
1790	Bichat, $P._1$, 1771-1802. (*Life of tissues.*) Girtanner, $P._1$ and $P._2$, about 1790. Kielmeyer, $P._2$, about 1790. Aldini, $P._3$, 1762-1834. (*Gas obtained from blood* by Sir H. Davy in 1799.)	Fourier, *M.*, 1772-1837. Brunel, *E.*, 1769-1849. Leslie, $P._3$, 1766-1832. W. Humboldt, $P._3$, 1767-1835. A. von Humboldt, $P._3$ and *N.*, 1769-1859. Haüy, $P._3$, 1743-1822. Ivory, *M.*, 1765-1842. Playfair, $P._3$, 1749-1819. Dalton, *C.*, 1766-1844. Jussieu, *B.*, 1748-1836. Cuvier, *C. A.*, 1769-1832. Ampère, $P._3$, 1775.1836. Jenner, $P._2$, 1749-1823. (*Vaccination, 1796.*)	Jeremy Bentham, 1748-1832. Goethe, 1749-1832. Jean Paul Richter, 1763-1825. Walter Scott, 1771-1832. Schiller, 1759-1805. Mrs. Siddons, 1735-1831. Flaxman, 1755-1826. Canova, 1757-1822. Beethoven, 1770-1827. Weber, 1786-1826. William Blake, 1757-1827. Schleiermacher, 1768-1834. Malthus, 1766-1834. Fichte, 1762-1814.	Republic proclaimed, 1792. The French Revolution, 1790. Louis XVI. guillotined, 1793. Robespierre ,, 1794. Washington, 1732-1799. Napoleon, 1769-1821. Battle of the Nile, 1798. Coal-gas used for lighting. 1792. Howard died at Kherson, 1790.

1800	Thomas Young, $P._1$ $P._2$ and $P._3$, 1773-1829. (*Measurement of time, theory of colour, &c., hydraulics of circulation.*) J. F. Berard, $P._1$, 1780-1828. Rudolphi, *A.*, 1771-1832. Charles Bell, $P._1$ and *S*, 1774-1842. (*Sensory and motor nerves.*) Richerand, $P._1$ and $P._2$, 1779-1840. Bostock, $P._1$, 1774-1846. Treviranus, $P._1$, 1776-1837. Spurzheim, $P._1$ and $P._2$, 1776-1832. (*Phrenology.*)	Kater, $P._3$, 1777-1835. Barlow, $P._3$, 1776-1862. Gauss, $P._3$, 1777-1855. Pfaff, *C.* and $P._3$, 1773-1852. Baily, $P._3$, 1774-1844. Malus, $P._3$, 1775-1812. Seebeck, $P._3$, 1770-1831. Oersted, $P._3$, 1777-1851. Arago, *As.*, 1786-1853. Thomas Thomson, *C.*, 1773-1852. Robert Brown, *B.*, 1773-1858.	Coleridge, 1772-1834. Wordsworth, 1770-1850. Byron, 1788-1824. Madame de Stäel, 1766-1817. Hegel, 1770-1831. Grimm, 1785-1863. Lamb, 1775-1834. Schlegel, Fried. v., 1772-1829. (*Founded Science of Language.*)	Union of Great Britain and Ireland, 1801. "Edinburgh Review," 1802. Assaye, 1803. Trafalgar, 1805. Nelson, 1758-1805. French Empire, 1804-1815. Austerlitz, 1805. Jena, 1806. Peninsular War, 1808-1814. Wellington, 1769-1852. Trevithick's first steam locomotive, 1804. First steamboat on Forth and Clyde Canal, 1802. Electrotyping invented, 1805.
1810	Edwards, *N.* and $P._1$, 1777-1842. Purkinje, $P._1$, *b.* about 1787. Sir B. Brodie, $P._1$ and *S.*, 1783-1862. Dutrochet, $P._3$, 1776-1847. Magendie, $P._1$, 1783-1855. (*Theories of absorption.*) G. Breschet, *P.*, 1784-1845. Meckel, *A.*, 1781-1833. E. Home, *C.*, *A.*, and *S.*, 1756-1832.	Peltier, $P._3$, 1785-1845. Döbereiner, *C.* and $P._3$, 1780-1849. Hare, $P._3$, 1781-1858. C. Ritter, $P._3$, 1779-1859. Gay Lussac, *C.*, 1778-1850. G. Stephenson, *E.*, 1781-1848. (*Locomotive.*) Fresnel, $P._3$, 1783-1827. Niepce, $P._3$, 1765-1833. Sir Humphry Davy, *C.*, 1778-1829. (*Safety lamp, 1815.*)	Shelley, 1792-1822. Keats, 1795-1821. Schelling, 1775-1854. Niebuhr, 1776-1831. Schopenhauer, 1788-1860. Ricardo, 1772-1823. Beranger, 1780-1857. Thorwaldsen, 1770-1844. Wilkie, 1785-1841. Turner, 1775-1851.	Invasion of Russia, 1812. Abdication of Napoleon at Fontainbleau, 1814. Battle of Waterloo, 1815. Talleyrand, 1754-1838. First electric arc light, 1810. Lithography, 1811.

Period.	Anatomists and Physiologists.	Representatives of Collateral Sciences.	Representatives of Philosophy, Literature, and Art.	Collateral Events.
1810	L. Oken, *A.*, 1779-1848.	Wollaston, *P.*$_3$, 1766-1828. Frauenhofer, *P.*$_3$, 1787-1826. Bessel, *M.* and *P.*$_3$, 1784-1846. Nobili, *P.*$_3$, 1784-1835. Ohm, *P.*$_3$, 1787-1854. Christopher Bernoulli, *P.*$_3$, *b.* 1782. Braconnet, *P.*$_3$, 1781-1855. Brande, *C.*, 1788-1866. Cagniard de la Tour, *P.*$_3$, *b.* 1776 Chevreul, *C.*, 1786-1888. Buckland, *N.*, 1784-1856. A. C. Becquerel, *C.* and *P.*$_3$, 1788-1878. Berzelius, *C.*, 1779-1848. De Candolle, *B.*, 1778-1841.	Champollion, 1790-1831. (*Deciphered Hieroglyphics, 1822.*)	Bell's "Comet," first paddle steamboat on Clyde, 1812. Oersted's discovery of electro-magnetism, 1819. Sömmering's first telegraph by electrolysis, about 1809. Queen Victoria born 1819.
1820†	Krause, *A.*, 1797-1868. Beaumont, *P.*$_2$, about 1824. (*Digestion.*) Gmelin, *C.*, 1788-1853. Serres, *A.*, 1782-1862. E. H. Weber, *P.*$_1$, 1795-1878. (*Circulation, muscular action.*) J. L. Prevost, *C.*, 1790-1850. Von Baer, *A.* and *P.*$_1$, 1792-1876. Marshall Hall, *P.*$_1$ and *P.*$_2$, 1790-1857. (*Reflex nervous action.*)	Basevi, *P.*$_3$, *b.* 1799. Despretz, *P.*$_3$, *b.* 1792. Chasles, *M.*, 1793-1880. Struve, *P.*$_3$, 1793-1864. Mary Somerville, *M.* and *P.*$_3$, 1780-1872. Daniell, *P.*$_3$ and *C.*, 1790-1845. Cauchy, *M.*, 1789-1857. Encke, *As.*, 1791-1865. Babbage, *P.*$_3$, 1792-1871. Savart, *P.*$_3$, 1791-1841.	Comte, 1798-1857. Whewell, 1794-1866. Sir W. Hamilton, 1788-1856. Thomas Chalmers, 1786-1847. Macaulay, 1800-1859. Heine, 1800-1856. Guizot, 1787-1874. Balzac, 1779-1850. Etty, 1782-1789. Chantrey, 1781-1841. Ary Scheffer, 1795-1858.	Charles X., 1824. Nicholas I., 1825-1855. Navarino, 1827. Insurrection in Poland, 1830-1831. Canning, 1770-1827. Catholic Emancipation, 1829. George Stephenson's first steam engine on railway, 1829. Hot-blast invented, 1828. Money panic, 1825.

	Flourens, $P._1$, 1794-1867. Ehrenberg, *N.*, 1795-1876. Poiseuille, $P._3$, 1799-1869. (*Use of manometers in investigating circulation.*) Dupuy, $P._1$ and $P._2$, 1774-1849.	Mitscherlich, $P._3$ and *C.*, *b.* 1794. Audouin, *N.*, 1797-1841. Poggendorff, $P._3$, 1796-1877. Payen, *C.*, *b.* 1796. Frauenhofer, 1787-1826. Bischof, *C.*, *b.* 1792. Moebius, *C.* and $P._3$, *b.* 1790.	Delaroche, 1792-1852. Rossini, 1792-1868. Spohr, 1784-1871. Donizetti, 1798-1848. Schubert, 1797-1828. Bellini, 1806-1835. Mendelssohn, 1809-1847. Meyerbeer, 1794-1864.	Caledonian Canal, 1824.
1830	Johann Müller, $P._1$, 1801-1858. Schleiden, *B.*, 1804-1872. (*Cell theory.*) Volkmann, $P._1$, 1801-1877. Schroeder van der Kolk, *A.* and $P._1$ 1797-1862. Matteucci, $P._1$ and $P._3$, 1811-1869. Magnus, *C.* and $P._1$. (*Collection of blood gases in 1836.*)	C. Lyell, *G.*, 1797-1875. Faraday, *C.* and $P._3$, 1794-1867 Sir W. Rowan Hamilton, *M.*, 1805-1865. Colladon, $P._3$, *b.* 1802. Sturm, $P._3$, 1803-1855. Lassaigne, $P._3$, *b.* 1800. Frémy, $P._3$ and *C.*, *b.* 1814. Listing, *M.*, *b.* 1808. Airy, *As.*, *b.* 1801. Melloni, $P._3$, 1798-1853. Amici, $P._3$, *b.* 1786. Sir John Herschell, *As.* and $P._3$, 1792-1871. Balard. *C.*, *b.* 1802. Von Bibra, $P._3$ and *C.*, *b.* 1806. Boussingault. *C.*, *b.* 1802. Challis, *M.*, 1803-1882. Christison, $P._1$ and $P._2$, 1779-1880. Mulder, *C.*, *b.* 1802. Gassiot, $P._3$. 1797-1877. Dumas, *C.*, 1806-1884. Sir D. Brewster, $P._3$, 1781-1868	Thomas Arnold, 1795-1842. J. S. Mill, 1806-1873. Chopin, 1809-1849. Milman, 1791-1868. Kèble, 1792-1866. Landseer, 1802-1873. Schumann, 1810-1856.	Liverpool and Manchester Railway, 1830. Abolition of Slavery, 1834. William IV., 1830-7. The Reform Bill, 1830-1832. Queen Victoria's reign begins, 1837. Faraday's discovery of induction, 1831. Salvatore da Negro's first electro-motor, 1830. Jacobi's electro-motor applied to propel vessel on Neva, 1834. Reis' first telephone, 1837. Gauss and Weber's electro-magnetic telegraph, 1833. Improvements in telegraphy by Wheatstone and Morse, 1837 to 1839. "Chambers' Journal," 1832.

Period.	Anatomists and Physiologists.	Representatives of Collateral Sciences.	Representatives of Philosophy, Literature, and Art.	Collateral Events.
1840+	Claude Bernard, $P._1$, 1813-1878. (*Vaso-motor nerves, &c., &c.*) Schwann, *A.* & $P._1$, 1810-1882. (*Cell theory.*) John Reid, $P._1$, 1809-1849. John Goodsir, *A.* and $P._1$, 1814-1867. (*Secretion, &c., &c.*) Fechner, *M.*, $P._3$, and *Ph.*, 1801-1887. (*Psycho-physik.*) Hutchison, $P._2$, about 1846. Allen Thomson, *A.* and $P._1$, 1809-1884. Carpenter, $P._1$, 1813-1885. Bowman, $P._1$ and *S.*, 1816. Owen, *C.A.*, 1804. Charles Darwin, *N.*, and *Ph.*, 1809-1882. Henle, *A.*, *b.* 1809. Ranke, *A.* Sharpey, $P._1$, 1802-1880. Hughes Bennett, *P.* and $P._2$, 1812-1875. Andrew Buchanan, $P._1$, 1798-1882. (*Coagulation of Blood.*)	Foucault, $P._3$, 1819-1868. Gorup Von Besanez, *C.*, 1817-1878 Thomas Graham, *C.* and $P._3$, 1805-1869. Lord-Justice Grove, $P._3$, 1811. A. W. Hofmann, *C.*, 1818. J. P. Joule, $P._3$. 1818-1889. Lehmann, *C.*, 1812-1863. W. H. Miller, *C.*. 1801-1880. De Morgan, *M.*, 1806-1871. Plateau, $P._1$, 1801-1884. J.R. Mayer, $P._3$ & $P._2$, 1814-1878 Regnault, *C.*, 1810-1878. Leverrier, *As.*, 1811-1877. Adams, *As.*, *b.* 1819. Liebig, *C.*, 1803-1873. Draper, $P._3$ and $P._2$, 1811-1882. Wheatstone, $P._3$, 1802-1875. Edward Forbes. *N.*, 1815-1854. Agassiz, *N.*, 1808-1873. Andrews, $P._3$ and *C.*, 1813. Angström, $P._3$. 1814-1874. Bunsen, *C.*, 1811. Cahours, $P._3$, *b.* 1813. Dana, *N.*, *b.* 1813. Kopp, *C.*, *b.* 1817. Wertheim, $P._3$. 1815-1861. Von Mohl, *B.*, 1805-1872. Simpson, $P._3$, 1811-1870. (*Chloroform.*)	T. Carlyle, 1795-1884. Wagner, 1813-1883. Liszt, 1811-1887. J. F. Millet, 1814-1875. Victor Hugo, 1802-1886. G. Sand, 1804-1870. J. S. Mill, 1806-1875. E. B. Browning, 1809-1861.	War in Scinde, 1843. Free Church Disruption, 1843. Last voyage of Sir J. Franklin, 1845. Repeal of Corn Laws, 1846. Nasmyth's steam hammer, 1842. Foucault's regulator for arc light, 1844. Steinheil's (1801-1870) first writing telegraph, about 1848. First printing telegraphs, Bail (1837), Bain, 1840, and Wheatstone, 1841. First cable telegraphs, Morse, 1842, Cornell, 1845. Free Trade, 1849. Year of Revolution, 1848.

1850	Ludwig, $P._{1}$, *b.* 1816. Helmholtz, *M.*, $P._{3}$, and $P._{1}$, 1821. Donders, $P._{1}$ and *S.*, 1818-1890. Brücke, $P._{1}$, 1819. Brown-Sequard, $P._{1}$ and $P._{2}$, *b.* 1818. Du Bois-Reymond, $P._{1}$, 1818. Schiff, $P._{1}$, *b.* 1823. Joseph Lister, $P._{1}$ and *S.*, 1827. *(Antiseptic surgery.)* Vulpian, $P._{1}$, 1826-1887. Vierordt, $P._{1}$, 1818-1884. Huxley, *N.*, *A.*, and $P._{1}$, 1825. Pettenkofer, *C.* and $P._{1}$, *b.* 1818. Lothar Meyer, *C*, and $P._{1}$, *b.* 1830. Turner, *A.* Ogilvie-Forbes, $P._{1}$, 1820-1886 Struthers, *A.*	Stokes, *M.* and $P._{3}$, 1819. W. Thomson, *M.* and $P._{3}$, 1824. Hind, *As.*, *b.* 1823. A. E. Becquerel, $P._{3}$, 1878. Berthelot, *C.* and $P._{3}$, *b.* 1827. Cayley, *M.*, 1821. Sylvester, *M.*, 1814. Clausius, *M.* Tyndall, $P._{3}$, *b.* 1820. Kekule, *C.*, 1829. Kirchoff, $P._{3}$, 1824-1887. *(Spectroscope.)* Syme, *S.*, 1800-1870. Macquorn Rankine, *E.*, 1820-1872. Haeckel, 1834. Knoblauch, $P._{3}$. Moleschott, *C.*, *b.* 1822. Pasteur, *C.* and $P._{1}$, 1822. *(Bacteriology.)* Virchow, 1821. *(Pathologist.)* Clerk-Maxwell, *M.* and $P._{3}$, 1831-1879.	Thackeray, 1811-1863. Dickens, 1812-1870. Marian Evans, 1819-1880. (George Eliot.) D. G Rossetti, 1828-1882. Rubinstein, 1829. Sainte-Beuve, 1804-1869. Von Ranke, 1795-1886. John Brown, 1810-1882. "Horæ Subsecivæ." Buckle, 1828-1882. Cardinal Newman, 1801-1890. Tennyson, 1809. R. Browning, 1812-1890. Longfellow, 1807-1882. Oliver Wendell Holmes, *b.* 1809. Walt Whitman, *b.* 1819.	Crimean War, 1853-1856. Indian Mutiny, 1857-8. Franco-Italian-Austrian War 1859. Bessemer steel process, 1856. Dynamo-electric machines, about 1858. First submarine telegraph, from Dover to Calais, 1857. Great Exhibition, 1851. Pacinotti's invention of ring-armature in dynamos, 1860. First steps towards an Atlantic cable by Cyrus Field, on 1854. First attempt to lay Atlantic cable, 1857, second in 1858. First telegram across Atlantic, 7th August, 1858.
1860				

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† The dates of comparatively recent authorities have not been in all cases ascertained.